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Luukkanen

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(54) **METHOD FOR REMOVING THE PRECOAT LAYER OF A ROTARY FILTER**

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(58) **Field of Classification Search**

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See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

2,022,069 A * 11/1935 Whitmore **B01D 33/21**
210/327

2,102,780 A * 12/1937 Blefeldt **B01D 33/466**
210/193

(Continued)

FOREIGN PATENT DOCUMENTS

FI 875275 5/1988
FI 931636 10/1994

(Continued)

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(57) **ABSTRACT**

A method associated for treating a precoat on a rotating filtering surface of lime sludge filter including: accumulating a precoat of lime sludge on the filtering surface by rotating the filtering surface in a first direction through a lime sludge slurry; after accumulating the precoat, rotating the filtering surface in an opposite direction to the first direction; while rotating the filtering surface in the opposite direction, spraying a liquid onto the precoat on the filtering surface wherein the spraying is applied to the precoat above a scraper adjacent the filtering surface and the spraying removes at least a portion of the precoat from the filtering surface, and flowing the removed precoat over the scraper and into a basin.

17 Claims, 2 Drawing Sheets

